

Applicants: Paul Simmons et al.  
Serial No.: 10/030,411  
Filed: April 11, 2002  
Page 2

Listing of Claims

1-24. (Cancelled).

25. (Currently Amended) An enriched cell population of cells wherein greater than 5% [1%] of the cells are mesenchymal precursor cells that are capable of giving rise to colony forming units-fibroblast (CFU-F).

26. (Currently Amended) An enriched cell population of cells as in claim 25, wherein the mesenchymal precursor ~~greater than 1%~~ of cells carry at least two markers selected from the group of surface markers specific for mesenchymal precursor cells consisting of LFA-3, THY-1, STRO-1<sup>bright</sup>, ~~STRO-1~~, VCAM-1, ICAM-1, PECAM-1, P-selectin, L-selectin, CD49b/CD29, CD49c/CD29, CD49d/CD29, CD29 (integrin beta), CD18, CD61, ~~6-19~~, thrombomodulin, CD10, CD13, STRO-2, CD146, and SCF or any combination thereof.

27. (Currently Amended) An enriched cell population of cells as in claim 26, wherein the mesenchymal precursor ~~greater than 10%~~ of cells carry the markers STRO-1<sup>bright</sup> ~~STRO-1~~ and VCAM-1.

28-30. (Cancelled).

31. (Currently Amended) An enriched cell population of cells as in claim 25, wherein at least 10% of the cells are mesenchymal precursor cells capable of giving rise to colony forming units-fibroblast (CFU-F).

32-33. (Cancelled).

Applicants: Paul Simmons et al.  
Serial No.: 10/030,411  
Filed: April 11, 2002  
Page 3

34. (Currently Amended) An enriched cell population of cells as in claim 25, wherein at least 40% of the cells are mesenchymal precursor cells capable of giving rise to colony forming units-fibroblast (CFU-F).
- 35-39. (Cancelled).
40. (Currently Amended) An enriched population of cells as in claim 25, wherein a proportion of the cells are capable of differentiation into at least two committed cell types selected from the group consisting of ~~including~~ adipose, areolar, osseous, cartilaginous, elastic and fibrous connective tissue.
41. (Currently Amended) An enriched population of cells as in claim 25, wherein the enriched population is suitable for seeding onto a vehicle for implantation to assist in bone growth.
42. (Currently Amended) An enriched population of cells as in claim 25, wherein the cells in the enriched population has comprise an exogenous nucleic acid transformed into them ~~such in to it se~~ that the population of cells may be introduced into the body of a patient to treat a disease or condition.
43. (Currently Amended) An enriched population of cells as in claim 25, wherein the cells in the enriched population comprise has an exogenous nucleic acid that expresses a therapeutic agent transformed into them ~~such in to it se~~ that the population of cells may be introduced into the body of a patient to release the therapeutic agent.

Applicants: Paul Simmons et al.  
Serial No.: 10/030,411  
Filed: April 11, 2002  
Page 4

44. (Currently Amended) An enriched population of cells as in claim 25, wherein the enriched population is used to augment bone marrow transplantation.
45. (Currently Amended) A composition comprising including the enriched population of cells of claim 25.
46. (Cancelled).
47. (Currently Amended) A composition as in claim 45, wherein the composition is preadsorbed onto ceramic vehicles that are precoated with fibronectin and are suitable for implantation to augment bone marrow transplantation.
48. (Currently Amended) A composition as in claim 45, wherein the composition is suitable for use in augmenting bone marrow transplantation.
49. (Currently Amended) A composition as in claim 48, wherein the composition also includes comprises haemopoietic cells.
50. (Currently Amended) A composition as in claim 45, wherein the population of cells comprises has an exogenous nucleic acid transformed into them such in to it se that the composition may be introduced into the body of a patient to treat a disease or condition.
51. (Currently Amended) A composition as in claim 45, wherein the population of cells comprises has an exogenous nucleic acid that expresses a therapeutic agent transformed into them such in to it se that the composition may be

Applicants: Paul Simmons et al.  
Serial No.: 10/030,411  
Filed: April 11, 2002  
Page 5

introduced into the body of a patient to release the therapeutic agent.

52. (Currently Amended) An enriched ~~cell~~ population of cells as in claim 25, wherein ~~the~~ greater than 5% [1%] of cells are mesenchymal precursor cells that are positive for one or more markers selected from the group consisting of STRO-1<sup>bright</sup>, VCAM-1<sup>bright</sup>, THY-1<sup>bright</sup>, CD146<sup>bright</sup> and STRO-2<sup>bright</sup>.
53. (Currently Amended) An enriched ~~cell~~ population of cells as in claim 52, wherein the STRO-1<sup>bright</sup> cells ~~carry~~ comprise a high copy number of STRO-1 on their surface.
54. (Currently Amended) An enriched ~~cell~~ population of cells as in claim 52, wherein the VCAM-1<sup>bright</sup> cells ~~carry~~ comprise a high copy number of VCAM-1 on their surface.
55. (Currently Amended) An enriched ~~cell~~ population of cells as in claim 52, wherein the THY-1<sup>bright</sup> cells ~~carry~~ comprise a high copy number of THY-1 on their surface.
56. (Currently Amended) An enriched ~~cell~~ population of cells as in claim 52, wherein the CD146<sup>bright</sup> cells ~~carry~~ comprise a high copy number of CD146 on their surface.
57. (Currently Amended) An enriched ~~cell~~ population of cells as in claim 52, wherein the STRO-2<sup>bright</sup> cells ~~carry~~ comprise a high copy number of STRO-2 on their surface.
58. (Currently Amended) An enriched ~~cell~~ population of cells as in claim 53, wherein the STRO-1<sup>bright</sup> cells are negative for

Applicants: Paul Simmons et al.  
Serial No.: 10/030,411  
Filed: April 11, 2002  
Page 6

at least one marker selected from the group consisting of CBFA-1, collagen type II, PPAR $\gamma$ 2, and glycophorin A.

59. (New) An enriched population of cells as in claim 25, wherein at least 10% of the cells are STRO-1<sup>bright</sup>.
60. (New) An enriched population of cells as in claim 25, wherein at least 40% of the cells are STRO-1<sup>bright</sup>.